

**ABLATION CATHETER ASSEMBLY AND METHOD  
FOR ISOLATING A PULMONARY VEIN**

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**Abstract**

A catheter assembly and method for treatment of cardiac arrhythmia. In one preferred embodiment, the catheter assembly includes a catheter body, at least one electrode, and a fluid source. The catheter body includes a proximal portion, an intermediate portion, a distal portion, a first lumen, and an ablation section. The intermediate portion extends from the proximal portion and defines a longitudinal axis. The distal portion extends from the intermediate portion and forms a helix or coil. The first lumen extends from the proximal portion to the distal portion. Finally, the ablation section is formed along the helix of the distal portion and defines a loop transverse to the longitudinal axis. The ablation section is, in one preferred embodiment, comprised of a microporous material in fluid communication with the first lumen so as to irrigate fluid from the first lumen to an exterior surface of the ablation section. The electrode is associated with the ablation section. Finally, the fluid source is provided to supply a conductive fluid to the first lumen. With this configuration, upon activation, the electrode supplies an ablation energy to fluid irrigated to the exterior surface of the ablation section, thereby ablating a continuous, closed lesion pattern. During use, for example, the catheter assembly can ablate a closed lesion pattern corresponding with the loop defined by the ablation section on a chamber wall about a pulmonary vein ostium to electrically isolate the pulmonary vein from the left atrium. In one preferred embodiment, the ablation section is comprised of a high density, expanded PTFE material. In another preferred embodiment, a shaping wire is slidably disposed within the catheter body to selectively dictate the desired helical shape of the distal portion